Data Description for Freshwater Sampling in Davis Pond Study Area

General:

The Louisiana Department of Wildlife and Fisheries generates these data on a regular schedule by means of samples with hoop nets, gill nets, rotenone, and electrofishing equipment at 31 stations in the Barataria Basin.

Electrofishing is directed at estimating game fish populations (largemouth bass, crappie, red drum, and spotted seatrout) and their forage base. Sampling consists of 900 seconds of shock time at each station, once in spring and fall of each year. The fall sample entails an evaluation the forage base by collecting, in addition to game fish, any fish small enough (less than 4 inches) to serve as forage for game fish.

Rotenone stations are sampled once per summer, after July 4, by enclosing one acre of water surface with a one-quarter inch mesh block-off net. Biologists in one boat use a pump and hose to inject the rotenone solution into the water column at a rate of 3 pints per acre-foot of water. A second boat follows to accomplish mixing by means of its propeller wash. Fish that float to the surface immediately are collected the same day. A second collection is made the next day when LDWF biologists return to retrieve the net. All fish collected are measured and weighed.

Hoop nets are deployed in pairs, one baited with soy meal, the other with menhaden, for periods ranging from 48 to 96 hours.

Gill nets are deployed overnight on a quarterly schedule.

Each record includes physical and meteorological measurements coincident with the sample.

Data Column Descriptions:

Station: Map 2003-11-0023.pdf shows the location of the sampling stations. Table 1 gives their geographic coordinates.

Table 1. Geographic Coordinates of Freshwater Sampling Stations

Station	Latitude	Longitude	Type
1	29° 50’ 17”	90° 16’ 08”	Electrofishing
2	29° 46’ 47”	90° 17’ 03”	Electrofishing
3	29° 43’ 17”	90° 08’ 32”	Electrofishing
4	29° 41’ 23”	90° 06’ 31”	Electrofishing
5	29° 40’ 29”	90° 03’ 10”	Electrofishing
6	29° 41’ 03”	90° 05’ 18”	Electrofishing
7	29° 37’ 05”	90° 09’ 29”	Electrofishing
8	29° 35’ 14”	90° 10’ 08”	Electrofishing
9	29° 33’ 23”	90° 04’ 11”	Electrofishing
10	29° 26’ 23”	90° 08’ 23”	Electrofishing
11	29° 26’ 07”	90° 04’ 00”	Electrofishing
12	29° 30’ 14”	90° 01’ 18”	Electrofishing
50	29° 50’ 17”	90° 16’ 08”	Gill Net
51	29° 43’ 18”	90° 11’ 06”	Gill Net
52	29° 35’ 55”	90° 08’ 46”	Gill Net
53	29° 39’ 23”	90° 07’ 11”	Gill Net
54	29° 32’ 30”	90° 07’ 14”	Gill Net
55	29° 27’ 05”	90° 02’ 04”	Gill Net
70	29° 51’ 33”	90° 13’ 26”	Hoop Net
71	29° 49’ 15”	90° 14’ 29”	Hoop Net
72	29° 45’ 11”	90° 09’ 15”	Hoop Net
73	29° 40’ 28”	90° 18’ 10”	Hoop Net
74	29° 38’ 34”	90° 15’ 27”	Hoop Net
75	29° 40’ 32”	90° 11’ 10”	Hoop Net
76	29° 34’ 08”	90° 08’ 07”	Hoop Net
77	29° 43’ 33”	90° 07’ 24”	Hoop Net
78	29° 32’ 05”	90° 04’ 00”	Hoop Net
79	29° 25’ 34”	90° 04’ 08”	Hoop Net
40	29° 49’ 10”	90° 12’ 32”	Rotenone
41	29° 46’ 04”	90° 15’ 02”	Rotenone
42	29° 32’ 08”	90° 09’ 32”	Rotenone

Date: mm/dd/yyyy

Time: 24-hour scale (military)

Sample Number: Hoop nets are deployed in pairs. The net identified as “1” is baited with soy meal; the net identified as “2” is baited with menhaden. Electrofishing samples are sometimes broken into two consecutive 450-second samples in order to shorten the holding time and thereby improve the survival chances of the collected fish.

Taxa: Identifies the fish caught by common (not scientific) name.

Size Group: Some observations record the length of a specimen or a group of specimens by classing them into size "bins" estimated to the nearest whole inch. For example, "Size Group=4" indicates a size group comprising all specimens between 3 and 4 inches.

Individual Length or Number in Size Group: The meaning of this column depends on the entry under *Length Interval* (see description below). Most specimens are measured and reported individually. When "Length Interval=0" this column reports that individual length. However some observations consist of a record of how many individual specimens in a sample had a length within the dimensions of a specified size group or "bin". The first observation in the table below shows a record of 468 menhaden measuring between 3 and 4 inches. "Size Group=4" indicates a "bin" comprising all specimens between 3 and 4 inches. "Length Interval=1" means that 468 refers to the number in this size group and not the length of an individual specimen. The last observation reports a single black drum measuring 528 mm in total length, as indicated by the "Length Interval=0" entry and a null entry under "Size Group".

Taxa	Size Group	Individual Length or Number in Size Group	Length Method	Length Interval (0 for individual lengths & 1 for size groups)
Gulf Menhaden	4	468	Total length (inches)	1
Gulf Menhaden	3	170	Total length (inches)	1
Gulf Menhaden	2	20	Total length (inches)	1
Black Drum		528	Total length (millimeters)	0

Length Method: Reports the units and method for measuring length of an individual specimen: either total length or standard length. Total length reports the distance from head to the tip of the tail, while standard length reports distance from head to the caudal peduncle.

Length Interval: An entry of "0" means that the observation under "Individual Length or Number in Size Group" represents the length of an individual specimen. An entry of "1" indicates that the entry is the number of specimens in the indicated size group.

Individual Weight: Weight of individual specimen.

Individual Weight Method (units): This column reports method of weight estimation and units used.

Gear: Reports the means of sample collection, e.g. electrofishing, rotenone application. Reports the design and dimensions of gill nets and hoop nets.

Sample Duration: Reported in various units, given in the next column.

Sample Duration Units: Seconds, hours, or days.

LDWF Project Code: All entries are identified as "4", meaning "Freshwater Finfish Fishery-Independent Monitoring".

LDWF Special Project Code: All entries are identified as "3", meaning sampling for the Davis Pond Project.

Area: This identifies which district of the LDWF performed the sampling. All entries are for District 7.

Water Body: Identifies the sampling location using the name of a local water body.

Wind Speed: Reported in knots. Some records are readings from a hand-held anemometer, others experiential estimates. The data set does not indicate which.

Wind Direction: Compass bearing in degrees.

Percent Cloud Cover: Field estimate.

Air Temperature: Field measurement of air temperature. Celsius degrees are mixed with Fahrenheit degrees. The seasonal context may supply clues as to which units apply.

Bottom Water Temperature (C): Field measurement of bottom water temperature in degrees Celsius.

Surface Water Temperature (C): Field measurement of surface water temperature in degrees Celsius.

Bottom Specific Conductance (mS/cm): Millisiemens per centimeter.

Surface Specific Conductance (mS/cm): Millisiemens per centimeter.

Bottom Salinity (ppt): Parts per thousand, or milligrams per liter.

Surface Salinity (ppt): Parts per thousand, or milligrams per liter.

Bottom Turbidity (ntu): Measured using a portable (YSI) nephelometer. Reported in nephelometric turbity units.

S*urface Turbidity (ntu):* Measured using a portable (YSI) nephelometer. Reported in nephelometric turbity units.

Bottom pH: Field measurement of water pH, taken mid-level in the water column using a YSI pH meter.

Surface pH: Field measurement of water pH, taken at the surface using a YSI pH meter.

Mid-level Oxygen: Concentration of dissolved oxygen in parts per million. Field measurement using a YSI dissolved oxygen meter.

Surface Oxygen: Concentration of dissolved oxygen in parts per million. Field measurement using a YSI dissolved oxygen meter.